Notice of Allowability	Application No.	Applicant(s)	
	10/604,422	REZNICEK ET AL.	
	Examiner	Art Unit	
	Allen C. Ho	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *application filed on 18 July 2003*.

2. ☒ The allowed claim(s) is/are *1-16*.

3. ☒ The drawings filed on *18 July 2003* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 072003
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with John A. Artz (Reg. No. 25,824) on 16 December 2004.

The application has been amended as follows:

(1) Paragraph [0036], line 5, "90" has been deleted.

(2) Paragraph [0047], line 2, "console 120" has been replaced by --table gantry processor 110--.

(3) Claim 1 (Presently Amended). A system for balancing a CT gantry mechanism having a stationary base member and a rotating base member, the rotating base member rotating about a Z-axis and having an x-ray tube and detector plate positioned thereon, a first weight stack mechanism having a first known plurality of weight members and spacers, a second weight stack mechanism having a second known plurality of weight members and spacers, said first and second stack members being positioned on said rotating base member at a pre-selected positions, and a pair of strain gage sensors positioned on said stationary base member adjacent said rotating base member.

(4) Claim 4 (Presently Amended) The system as described in claim 1 wherein said pre-selected~~selection~~ positions are approximately 90° apart.

(5) Claim 5 (Presently Amended) The system as described in claim 1 wherein said pre-selected~~selection~~ positions are situated at the approximately 107° and 180° positions on said rotating base member, said positions be measured counterclockwise from a 0° position on said rotating base member.

(6) Claim 8 (Presently Amended) A method for balancing a CT gantry mechanism having a stationary base member, a rotating base member ~~and~~rotating about a Z-axis, and with an x-ray tube and detector plate positioned on said rotating base member, the method comprising the steps of: providing a first plurality of individual weight members and spacers at a first pre-selected location on said rotating base member; providing a second plurality of individual weight members and spacers at a second pre-selected location on said rotating base members; positioning trial weights on said rotating base member; conducting a first baseline run, measuring the imbalance of the CT gantry mechanism~~system~~ and calculating the imbalance magnitudes and phase angles; conducting two additional trial runs with trial weights positioned at prespecified locations on said rotating base member; calculating the mass and Z-axis location of the mass necessary to statically and dynamically balance said mechanism; and positioning the first and second plurality of weight members and spacers in order to meet said calculations.

(7) Claim 12 (Presently Amended) A method as described in claim 8 wherein said pre-selected location of said first and second plurality of weight members and spacer members are at the 107° and 108° locations on said rotating base member.

said positions be measured counterclockwise from a 0° position on said rotating base member.

(8) Claim 16 (Presently Amended) The method as described in claim 8 wherein said measuring the imbalance of the CT gantry mechansim~~system~~ is conducted by at least a pair of strain gage members~~member~~.

Allowable Subject Matter

2. Claims 1-16 are allowed.

3. The following is an examiner's statement of reasons for allowance:

With regard to claims 1-7, the prior art fails to teach or fairly suggest a system for balancing a CT gantry mechanism as claimed in claim 1.

With regard to claim 8-16, the prior art fails to teach or fairly suggest a method for balancing a CT gantry mechanism as claimed in claim 8.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

(1) Halsmer (U. S. Patent No. 6,748,806 B2) disclosed a dynamic balancing system for a CT gantry.

(2) Murray *et al.* (U. S. Patent No. 6,412,345 B1) disclosed a method for balancing a rotational component of a CT.

(3) Cameron *et al.* (U. S. Patent No. 5,627,762) disclosed a computer implemented balancer.

(4) Swain *et al.* (U. S. Patent No. 5,448,608) disclosed a CT comprising strain gages for measuring stress or torque.

(5) Gordon *et al.* (U. S. Patent No. 5,432,339) disclosed an apparatus and method for measuring geometric, positional, and kinematic parameters of a rotational device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen C. Ho whose telephone number is (571) 272-2491. The examiner can normally be reached on Monday - Friday from 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward J. Glick can be reached at (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Allen C. Ho

Allen C. Ho
Patent Examiner
Art Unit 2882

16 December 2004